

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Mark E. Tuttle et al.

Application No.: 10/723,363

Confirmation No.: 9952

Filed: November 26, 2003

Art Unit: 2624

For: PACKAGED MICROELECTRONIC IMAGERS Examiner: Amara Abdi
AND METHODS OF PACKAGING
MICROELECTRONIC IMAGERS

RESPONSE TO ELECTION OF SPECIES REQUIREMENT

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the election requirement set forth in the Office Action mailed on June 19, 2007 (Paper No. 20070608), Applicants hereby provisionally elect Species I represented by FIG. 4, with traverse; at least claims 1-7, 12, 14, 15, 16, 18-24, 26, 27, 29-31, 34, 39-43, and 48 are readable on the elected species. Claims 1, 2, 14, 18, 19, 39, 40, 41 are generic to all species.

M.P.E.P. §803 directs as follows: “If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.” The directive should be followed in this case. The Office Action fails to provide a *prima facie* basis for the election of species requirement, i.e., it does not explain that the inventions have a separate classification, or separate status in the prior art, or a different field of search as defined in M.P.E.P. § 808.02. *See* M.P.E.P. § 803 (Guidelines). Thus, claims 1-57 of the application can be examined together “without serious burden.”

Applicants respectfully submit, as noted, that at least some of the claims that are readable on the elected species (Species I) are also generic to Species II (FIG. 5), Species III (FIG. 6), Species IV (FIG. 7), Species V (FIG. 8), Species VI (FIG. 9), and Species VII (FIG. 11). Indeed, the Office Action admits that claim 1 is generic. As discussed below, claims 14, 18, 26, and 39 are also generic to Species I-VII. Applicants respectfully submit that these claims, along with their dependent claims, which may or may not read on each Species, can be examined together “without serious burden.”

Applicants respectfully submit that claims 8, 9, 10, and 13 (which depend from claim 1, which is generic to Species I-VII) can be examined along with the provisionally elected Species I claims listed above “without serious burden.” *See* M.P.E.P. § 803.

Independent claim 14 is also generic to Species I-VII. Claim 14 recites a microelectronic imager, comprising, *inter alia*, “a microelectronic die having an image sensor and a plurality of contacts electrically coupled to the image sensor; a first referencing element fixed relative to the die, the first referencing element having a first alignment component at a lateral distance from the image sensor and a first stop component spaced apart from the image sensor along an axis normal to the image sensor by separation distance; an optics unit having an optic member; and a second referencing element connected to the optics unit, the second referencing element having a second alignment component engaged with the first alignment component to align the optic member with the image sensor and a second stop component engaged with the first stop component to space the optic member apart from the image sensor by a desired distance.”

Claim 14, which reads on Species I, also reads on FIGS. 5, 6, 7, 8, 9, and 11 (Species II-VII as defined by the Office Action). Applicants submit that claim 17 (which depends from claim 14) can be examined along with the provisionally elected Species I claims listed above “without serious burden.” *See* M.P.E.P. § 803.

Independent claim 18 recites a microelectronic imager, comprising “an imaging unit including (a) a microelectronic die having an image sensor and a plurality of external contacts electrically connected to the image sensor, and (b) a first referencing element fixed to the imaging unit; and an optics unit including an optic member and a second referencing element fixed to the

optics unit and seated with the first referencing element, the first and second referencing elements being configured to align the optic member with the image sensor and space the optic member apart from the image sensor by a desired distance when the first and second referencing elements are seated together.”

Claim 18, which reads on Species I, also reads on FIGS. 5, 6, 7, 8, 9, and 11 (Species II-VII as defined by the Office Action). Applicants submit that claim 25 (which depends from claim 18) can be examined along with the provisionally elected Species I claims listed above “without serious burden.” *See* M.P.E.P. § 803.

Independent claim 39 recites a method of packaging an imager, comprising “providing an imaging unit having (a) a microelectronic die with an image sensor and a plurality of external contacts electrically coupled to the image sensor, and (b) a first referencing element fixed to the imaging unit and having a first interface feature at a set reference position relative to the image sensor; providing an optics unit having an optic member and a second referencing element fixed to the optics unit, the second referencing element having a second interface feature at a set reference position relative to the optic member; and attaching the second referencing element to the first referencing element by seating the second interface feature with the first interface feature in a predetermined position in which the optic member is at a desired location relative to the image sensor.”

Claim 39, which reads on Species I, also reads on FIGS. 5, 6, 7, 8, 9, and 11 (Species II-VII as defined by the Office Action). Applicants submit that claims 44, 45, 46, 47, and 49 (which depend from claim 39) can be examined along with the provisionally elected Species I claims listed above “without serious burden.” *See* M.P.E.P. § 803.

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Applicants respectfully request that at least claims 1-35 and 39-49 be examined together in one application, should the Examiner maintain an election of species requirement.

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Respectfully submitted,

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